

(19)



Europäisches Patentamt

European Patent Office,

Office européen des brevets



(11)

EP 1 043 656 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:

14.02.2001 Bulletin 2001/07

(51) Int. Cl.⁷: **G06F 9/44**, G06F 9/445

(43) Date of publication A2:

11.10.2000 Bulletin 2000/41

(21) Application number: **00107607.4**(22) Date of filing: **07.04.2000**

(84) Designated Contracting States:

**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**

Designated Extension States:

AL LT LV MK RO SI(30) Priority: **09.04.1999 US 289787**

(71) Applicant:

**Sun Microsystems, Inc.
Palo Alto, California 94043 (US)**

(72) Inventors:

- Northcutt, J. Duane
Menlo Park, California 94025 (US)

• Wall, Gerard A.

San Jose, California 95136 (US)

• Hanko, James G.

Redwood City, California 94061 (US)

• Stoltz, Benjamin H.

Mountain View, California 94041 (US)

(74) Representative:

**Goddar, Heinz J., Dr.
FORRESTER & BOEHMERT
Franz-Joseph-Strasse 38
80801 München (DE)**
(54) Method and apparatus for synchronizing firmware

(57) The invention is a method and apparatus for synchronizing firmware associated with a first computer device and a second computer device, such as a server and a client computer. In accordance with one embodiment of the invention, the method comprises the steps of providing information regarding a characteristic of the firmware associated with the first and second devices, comparing the provided firmware information to determine if the firmware is synchronized, and associating

new firmware with the second device to synchronize the firmware if the firmware is found to not be synchronized in the comparing step. In one or more embodiments of the invention, the firmware associated with the second device is not modified unless the integrity of the firmware to be installed on the second device is verified using a digital signature.

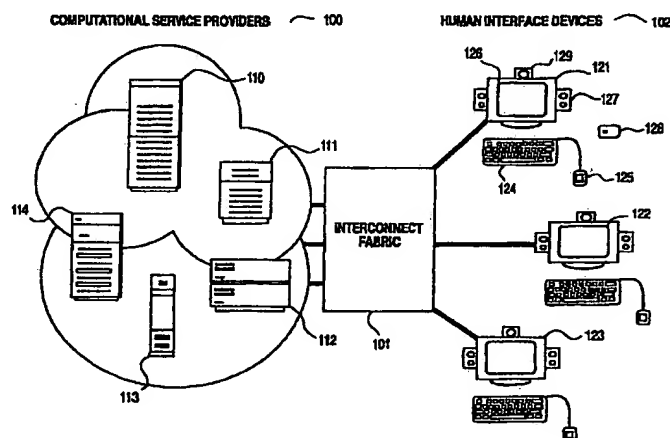


FIG. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 10 7607

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 2 269 032 A (ORBITEL MOBILE COMMUNICATIONS) 26 January 1994 (1994-01-26)	1-3,15	G06F9/44 G06F9/445
Y	* page 9, line 19 - page 14, line 19 *	4-8, 12-14, 16,17, 20-22	
Y	EP 0 706 275 A (IBM) 10 April 1996 (1996-04-10) * page 5, line 47 - page 7, line 5 *	4-6,12, 16,17,22	
X	"VERSION EQUALIZER PROGRAM FOR SERVER/CLIENT" IBM TECHNICAL DISCLOSURE BULLETIN,US,IBM CORP. NEW YORK, vol. 38, no. 8, 1 August 1995 (1995-08-01), pages 575-576, XP000534636 ISSN: 0018-8689	23	
Y	* the whole document *	7	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Y	EP 0 849 676 A (PHILIPS PATENTVERWALTUNG ;PHILIPS ELECTRONICS NV (NL)) 24 June 1998 (1998-06-24) * column 3, line 12 - column 4, line 47 *	13,14, 20,21	G06F
X	EP 0 449 530 A (CANON KK) 2 October 1991 (1991-10-02) * column 2, line 44 - column 3, line 9 * * column 7, line 8 - column 9, line 18 *	1-3,15, 18,19,23	
X	EP 0 793 166 A (AISIN AW CO) 3 September 1997 (1997-09-03) * column 12, line 29 - line 41 *	1-3,15, 20	
-/--			
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 December 2000	Examiner Bijn, K
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document</p> <p>T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document</p>			



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 10 7607

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	WO 99 06910 A (FAIRMAN BRUCE ;LUDTKE HAROLD A (US); PROEHL ANDREW M (US); SHIMA H) 11 February 1999 (1999-02-11) * page 11, line 8 - page 12, line 21 *	8	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 December 2000	Examiner Bijn, K
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 10 7607

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-12-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2269032 A	26-01-1994	AU 4206193 A	27-01-1994
		DE 69323015 D	25-02-1999
		DE 69323015 T	10-06-1999
		EP 0583077 A	16-02-1994
		ES 2130226 T	01-07-1999
		US 5430877 A	04-07-1995
EP 0706275 A	10-04-1996	CA 2157971 A	16-03-1996
		US 5956408 A	21-09-1999
EP 0849676 A	24-06-1998	DE 19652628 A	25-06-1998
		JP 10190832 A	21-07-1998
		US 6141795 A	31-10-2000
EP 0449530 A	02-10-1991	JP 3273424 A	04-12-1991
		JP 3273425 A	04-12-1991
		JP 3276328 A	06-12-1991
		US 5608910 A	04-03-1997
EP 0793166 A	03-09-1997	JP 9053948 A	25-02-1997
		JP 3097514 B	10-10-2000
		JP 9089581 A	04-04-1997
		US 6067500 A	23-05-2000
WO 9906910 A	11-02-1999	AU 8594098 A	22-02-1999
		CN 1265754 T	06-09-2000
		EP 0998704 A	10-05-2000